CLAIMS

1.   A method of testing a telecommunications system, the method comprising;

    1)   applying a first AC test signal having a first signal frequency to the system and measuring the response of the system to the first test signal;

    2)   applying a second AC test signal having a second signal frequency different to the first signal frequency to the system and measuring the response of the system to the second test signal; and

    3)   calculating one or more parameters of the system from the responses measured in steps 1) and 2).

2.   A method according to claim 1 wherein the first and second test signals are applied at different times.

3.   A method according to claim 1 wherein one or both of the test signals has a substantially sinusoidal waveform.

4.   A method according to claim 1 wherein less than five cycles of each signal is applied to the system.

5.   A method according to claim 1 wherein the test signals are each applied to the system through a known impedance.

6.   A method according to claim 1 further comprising applying;

    4)   applying one or more additional test signals to the system and measuring the response of the system to at least one test signal; and

    wherein step 3) comprises calculating one or more parameters of the system from the responses measured in steps 1), 2) and 4).

7.   A method according to claim 1 wherein the system comprises first and second transmission lines, and wherein each step of applying a test signal and measuring the response of the system comprises

a)   applying the test   signal to the first line and monitoring the response of the first line and the second line to the test signal; and

b)   applying the test signal to the second line and monitoring the response of the second line and the first line to the second test signal.

8.   A method of testing a telecommunications system comprising first and second transmission lines, the method comprising

1)   applying a first test signal to the first line and measuring the response of the first line and the second line to the first test signal;

2)   applying a second test signal to the second line and measuring the response of the second line and the first line to the second test signal; and

3)   calculating one or more parameters of the telecommunications system from the responses measured in steps 1) and 2).

9.   A method according to claim 8 wherein the first and second signals each comprise AC signals.

10.   A method according to claim 9 wherein the signal frequencies of the first and second test signals are substantially identical.

11.   A method according to claim 10 wherein the first and second test signals have a known phase relationship.

12.   Apparatus for testing a telecommunications system, the apparatus comprising;

1)   means for applying a first AC test signal having a first signal frequency to the system;

2)   means for measuring the response of the system to the first test signal;

3)   means for applying a second AC test signal having a second signal frequency different to the first signal frequency to the system;

4)   means for measuring the response of the system to the second test signal; and

5) means for calculating one or more parameters of the system from the responses measured in steps 1) and 2).

13. Apparatus for testing a telecommunications system comprising first and second transmission lines, the apparatus comprising

    1) means for applying a first test signal to the first line

    2) means for measuring the response of the first line and the second line to the first test signal;

    3) means for applying a second test signal to the second line;

    4) means for measuring the response of the second line and the first line to the second test signal; and

    5) means for calculating one or more parameters of the telecommunications system from the responses measured in steps 1) and 2).